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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,625	12/20/2000	Frank Bor-Her Chen	25164-67462	9358
28863 7590 04/23/2007 SHUMAKER & SIEFFERT, P. A. 1625 RADIO DRIVE SUITE 300 WOODBURY, MN 55125			EXAMINER TSOY, ELENA	
			ART UNIT 1762	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/23/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/742,625

Applicant(s)

CHEN ET AL.

Examiner

Elena Tsoy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 37-39, 50-52 and 67-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 37-39, 50-52 and 67-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 12, 2007 has been entered.

Response to Amendment

Amendment filed on March 12, 2007 has been entered. Claims 1-36, 40-49, 53-66 have been cancelled. New claims 67-70 have been added. Claims 37-39, 50-52, and 67-70 are pending in the application.

Claim Objections

1. Claim 50 stands objected under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim for the reasons of record set forth in paragraph 1 of the Office Action mailed on 10/11/2006.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Rejection of claims 44-46, 48, and 54 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention has been withdrawn due to cancellation of the claims.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Rejection of claims 37-39, 41-43, and 51-52 under 35 U.S.C. 103(a) as being unpatentable over DE 2224732 in view of Carmichael (US 2,375,195) has been withdrawn due to amendment.

6. Rejection of claims 37-39, 41-43, and 51-52 under 35 U.S.C. 103(a) as being unpatentable over DE 2224732 in view of Carmichael, further in view of Helmer et al (WO 96/22338) has been withdrawn due to amendment.

7. Rejection of claims 38-39, and 50 under 35 U.S.C. 103(a) as being unpatentable over DE 2224732 in view of Carmichael/DE 2224732 in view of Carmichael, further in view of Helmer et al/ and further in view of van der Hoeven (US 4,789,604, hereafter '604) has been withdrawn due to amendment.

8. Claims 37-39, 50-52, and 67-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 2224732 in view of Cummings (US 3,529,993), further in view of Helmer et al (WO 9622338).

The Examiner Note: instead of WO 9622338, the Examiner will refer to US 6,075,079 of the same patent family for convenience.

DE 2224732 discloses a method for finishing the surface of chipboard, fibreboard, plywood producing comprising impregnating *paper* sheet (claimed compressible mat comprising fibers, page 8, line 1) with aqueous fast-curing aminoplastics resins (claimed primer), drying for 1

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minutes at 130⁰C (See translation, page 7, line 5), coating on one or both sides with a mixture of an aqueous fast-curing amino-plastics resin and a dispersion of a self-cross-linking acrylic resin which give glossy patch-free surfaces when pressed onto boards of wooden material on removal from the mould hot (claimed thermosetting polymers) (See Abstract).

DE 2224732 fails to teach that the primer forms a chemically crosslinked polymer matrix upon application of the primer without heat drying step, so that the aqueous resin mixture is applied to the cured primer (Claim 37).

Cummings teaches that amino resins curing fast at room temperature may be used for factory applied *wood priming* (See column 2, lines 14-20) or in *traffic* paints where virtually no waiting period is necessary for the paint to dry before traffic can pass (See column 2, lines 36) instead of heat curing or slow curing prior art compositions including prior art wood primers (See column 1, lines 56-66).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used amino resins curing fast at room temperature in DE 2224732 instead of heat curing aminoplastics resins in order to achieve faster curing without any extra heating steps since Cummings teaches that his amino resins cure faster at room temperature than known wood primers.

DE 2224732 in view of Cummings fails to teach that claimed composition is used as primer (Claim 37).

Helmer et al teach a fast hardening aqueous (amino resin) coating composition that is substantially identical to that of claimed invention (See Abstract) can be utilized in applications where it is desirable to form a hard, smear-resistant, non-tracking surface very quickly after deposit of the coating under ambient conditions, *in particular*, as fast hardening aqueous traffic

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marking paint, which forms a hard, smear-resistant surface very soon after application under ambient conditions to a surface, such as a road way, and which allows the resumption of normal traffic with minimal interruption (See column 1, lines 11-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a fast hardening aqueous coating composition of Helmer et al as amino resin in DE 2224732 in view of Cummings with the expectation of providing the desired fast cured hard, smear-resistant layer since Helmer et al teach that their fast hardening aqueous coating composition is suitable in applications where it is desirable to form a hard, smear-resistant, non-tracking surface very quickly after deposit of the coating under ambient conditions, *in particular*, as fast hardening aqueous traffic marking paint.

It is held that the selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). See MPEP 2144.07.

As to claim 38, DE 2224732 teaches that double impregnated *paper* sheet (See Translation, page 2, P4) is pressed onto wood plates under pressure and heat (See Translation, page 3, P1). It is well settled that choice of sequence of adding ingredients does not involve invention.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have positioned paper impregnated with a primer in the cited prior art onto wood plates, then applied a top coat followed by hot pressing with the expectation of providing the desired glossy patch-free surface since it is held that choice of sequence of adding ingredients does not involve invention.

As to claim 50, the limitations of dependent claim 50 are described in the specification as being not subject matter of claimed invention (See specification, page 2, lines 1-2, describing that

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the mat is *typically* treated with a pre-press sealer to provide release from the hot press platen and thus optimize surface smoothness and minimize buildup on the press platens (metal plates)).

As to claims 51-52, Helmer et al teach that the solids content may be 40-70 % (See column 13, lines 17-20). Also, it is held that concentration limitations are obvious absent a showing of criticality. *Akzo v. E.I. du Pont de Nemours* 1 USPQ 2d 1704 (Fed. Cir. 1987). It is also held that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). See also *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have determined the optimum values of the relevant concentration parameters (including those of claimed invention) in the cited prior art through routine experimentation in the absence of showing of criticality.

9. Claims 38-39, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 2224732 in view of Cummings, further in view of Helmer et al, and further in view of van der Hoeven (US 4,789,604).

The cited prior art fails to teach that paper is glued to the surface of a compressible mat.

van der Hoeven teaches that the substrate for coating may be a wood panel with paper attached to it (See column 6, lines 25-54). (In such embodiment, the polymerizable coating is placed on the paper (col. 6, lines 30-32). Adjacent layers may be attached by glue (col. 3, line 50- col. 4, line 5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied an adhesive in the cited prior art onto a paper glued to a wood panel, then applied a top coat followed by hot pressing with the expectation of providing the desired glossy patch-free surface since it is held that choice of sequence of adding ingredients does

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not involve invention, and van der Hoeven teaches that the substrate for the coating may be a wood panel with paper attached to it.

As to claim 50, van der Hoeven teaches that a top, release coating (3) may be applied to the polymer before compressing and heating (col. 10, lines 48-57). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied a top, release coating to the polymer before compressing and heating in the cited prior art with the expectation of preventing metal marking.

Response to Arguments

10. Applicant's arguments with respect to claims 37-39, 50-52, and 67-70 have been considered but are moot in view of the new ground(s) of rejection.

As to claim 50, Applicants state that "consisting essentially of" claims are not strictly closed, and are open to additional steps that do not alter the basic and novel characteristics of the claimed method. Page 10, lines 14-17 state that in addition to the step of applying a thermosetting top coat composition over the chemically crosslinked primer coating, a release composition may be applied to the ease release of the coated composite substrate from the press. Thus, claim 50 is directed to an embodiment of the process in which the release coating is applied on the top coat to facilitate release from the press. This is merely an optional step of the process to ease release from the press, and does not alter the basic and novel characteristics of the process as claimed.

Applicants submit that this subject matter is a proper additional optional step that may be recited in an independent claim with a consisting essentially of transitional phrase. The Examiner points out that one embodiment of the process the release coat is applied on the primer and in another embodiment the release coat is applied on the top coat. Applicants agree with the Examiner's statement. However, to establish that a claim depending from a consisting essentially of claim is

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improper, the Examiner must establish that the subject matter of the dependent claim would alter the basic and novel properties of the process. The fact that different embodiments of the process utilize different steps does not, without more, establish that such steps alter the basic and novel characteristics of the process. The Examiner has not provided any evidence that this step would alter the basic and novel characteristics of the presently claimed process. Applicants respectfully submit that, absent such evidence, that claim 50 properly depends on claim 37.

The Examiner respectfully disagrees with this argument. First of all, Applicants statement, "This is merely an *optional* step of the process to ease release from the press" is incorrect because neither Claim 50 nor the specification as originally filed recites that the step of applying a release coating is *optional*;

Secondly, in contrast to Applicants argument, the Examiner has provided evidence that the step of applying a release coating would alter the basic and novel characteristics of the process of claim 37, by stating that the specification as originally filed stated that a process of claim 37 was *one embodiment* of Applicants' invention, and a process of claim 50 was *another embodiment* of Applicants' invention (See specification, page 10, lines 22-26), i.e. a process of claim 50 is independent and distinct from embodiment of process of claim 37 according to Applicants own disclosure;

Thirdly, Applicants' logic that claim 50 does not alter the basic and novel characteristics of the process of claim 37 is incorrect for at least the reason that 102 reference which would read on steps of a process of claim 50 would not read on "essential" steps of a process of claim 37 because the specification as originally filed discloses that the process of claim 37 is one embodiment of Applicants' invention and the process of claim 50 is *another* embodiment of Applicants' invention (not optional variation of the same first embodiment), i.e. a step of applying a release coating in

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claim 50 is "essential" step of the *another* embodiment; and there is being no statement in the specification that the step of applying a release coating is *optional*. Thus, claim 50 fails to teach that to *further* limit independent claim 37.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is 571-272-1429. The examiner can normally be reached on Monday-Thursday, 9:00AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elena Tsoy
Primary Examiner
Art Unit 1762

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April 19, 2007